



Q-400 - 3D Deformation Measurement on any solid Material and Contour - non contact and true full field

Digital 3D Image Correlation System Q-400

Advanced Full-Field Displacement and Strain Analysis

Applications

- Component and Material testing (Displacements, Strains, Youngs Modulus, Poisson Ratio, Elasto-Plastic Behaviour...)
- FEA validation
- Failure investigation
- Fracture mechanics
- High speed measurements & Vibration analysis (Dynamic applications, transient events)
- All shapes
- Advanced materials (CFRP, wood, fiber injected PE, metal foam, rubber...)

Features

- Extended export and import
- 3D display of measured values
- Fast and easy automated calibration procedure
- Online feedback of accuracy and quality
- Enhanced triggering functions
- Different coordinate systems

The Digital 3D Correlation System Q-400 is an optical measuring instrument for true full field, non-contact and three-dimensional analysis of contour, displacements and strains on components and specimens.

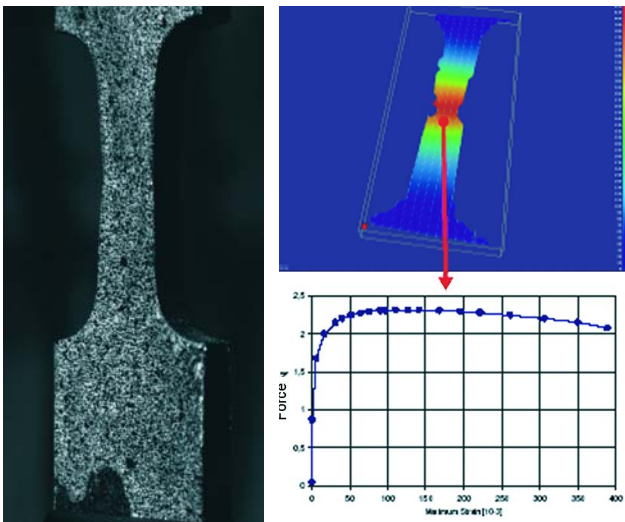
User friendly System

The software offers convenient data handling in a very intuitive way, reliable evaluation and extensive post-processing and analysis capabilities (e.g. determination and visualisation of principal strain).

The standard HiLiS Illumination is part of the system and provides cold and extremely homogenous light and thus supplies excellent conditions for measurement. An easy calibration procedure reduces measurement time.

Material Properties

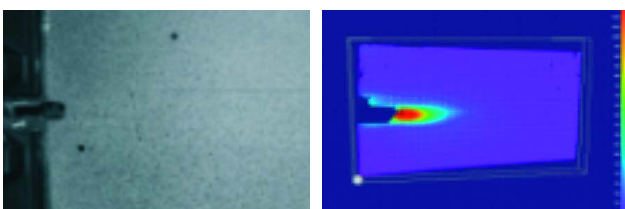
Digital Image Correlation offers characterization of material parameters far into the range of plastic deformation. Its powerful data analysis tools allow the determination of the location and amplitude of maximum strain, which are important functions in material testing.



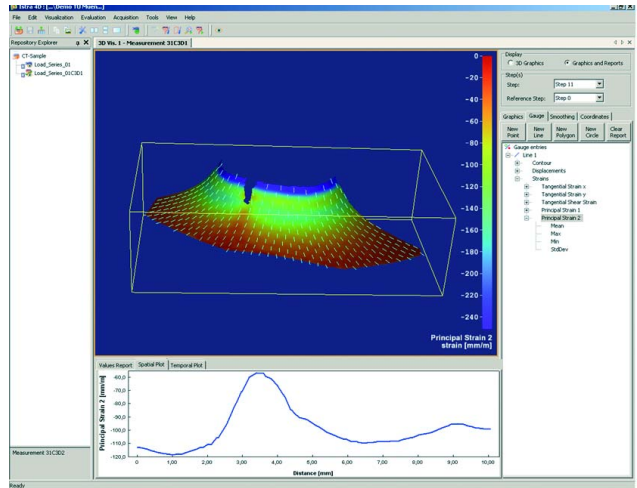
Tensile Loading up to Plastic Deformation

Fracture Mechanics

Digital Image Correlation is also ideal for fracture mechanics investigation. The full-field measurement delivers exact information about local and global strain distribution, crack growth, and can be used for the determination of important fracture mechanics parameters.

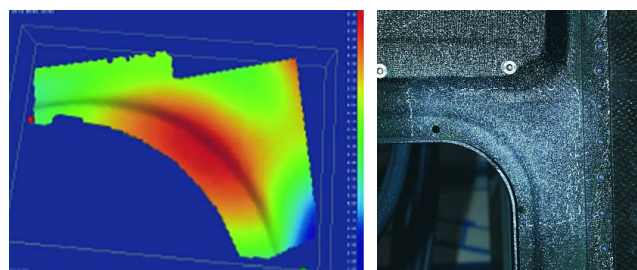


Crack growth. Live image (left) and principal strain (right).



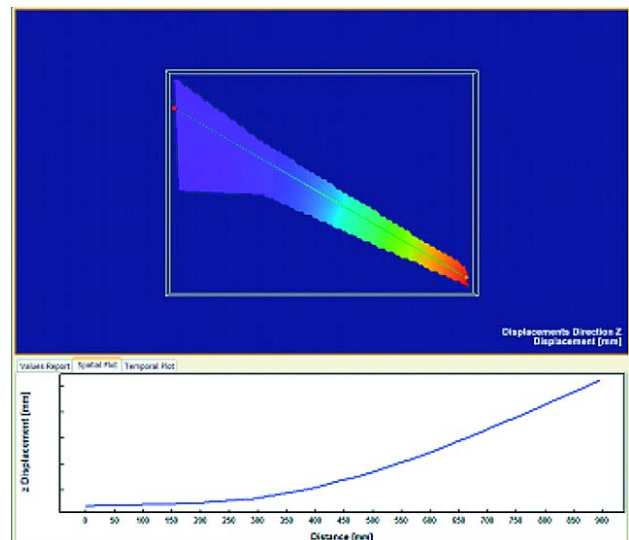
The Q-400 software offers convenient data handling, reliable evaluation and extensive post processing and analysis capabilities

Component Testing and FEA Validation



Deformation analysis on the corner of a helicopter structure (carbon fibre reinforced plastics)

Vertical displacement of a wing running in a wind tunnel



Additional information

For additional information please contact your Dantec Dynamics representative.

The specifications in this document are subject to change without notice